

**RESOLUTION ENHANCEMENT OF HALF-TONED BLACK
DATA TRANSMITTED WITH COLOR DATA**

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ABSTRACT OF THE DISCLOSURE

5 When black regions are adjacent to color regions, the adjacent black regions
are encoded (rendered) at the resolution of the color regions (e.g., 300 dpi) even
though the printer has the capability of printing black at a higher resolution (e.g., 600
dpi). To make full use of the 600 dpi resolution of the printer, the black pixels are
separated from the color pixels. The 300 dpi resolution black pixel field is
10 converted to a 600 dpi black image field. A window surrounding a selected group of
(600 dpi) black/white target pixels is chosen. The pixels in the window are applied
to a logic circuit having a plurality of logical conditions. As a result of the logic
processing, values of each of the target pixels can be changed to a different pixel
value to avoid jagged edges in the printed images, thereby providing a pseudo-600
15 dpi resolution for the target pixels. The logical operations are performed until all of
the pixels have values determined by the logic circuit. The resulting processed pixel
field provides a more satisfactory printed image. The window is selected so that the
pixel fields can be represented by word-length data groups. Black pixels rendered at
the higher resolution are generally unaffected by the logic circuit. Thus, black pixels
20 are rendered at two resolutions but printed at the same resolution.